

**Re:**

**Bob Benson** to: Brattin, Bill

05/17/2012 08:56 AM

From: Bob Benson/R8/USEPA/US  
To: "Brattin, Bill" <brattin@srcinc.com>  
Cc: David Berry/R8/USEPA/US@EPA

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Here are my suggestions for the summary table of modeling results.

1. Provide the full equations for each model form.
2. Provide the equation for calculating the Residence Time Weighted metric. What are the units? How is the BMDL converted to the POD?

My priority for the next task is to run the models with any pleural thickening (73 cases) as the endpoint. The SAB will likely make this as a recommendation and may ask that we also include parenchymal (interstitial) changes in the endpoint. My thought is that adding parenchymal changes is not justified biologically and will only add 3 additional cases. Therefore, the RfC is not going to change significantly.

Then the next task is to figure out how to model incidence instead of prevalence. See the Jarvholm and Paris publications for insights on model form. Julian Peto made a large point about this during the first conference call. It was not clear to me whether his point made any headway with the full panel.

We also need to consider what to do about Jim Webber's issue about the use of geometric statistics. We probably should develop a strategy and then approach UC to discuss whether to change the cumulative exposure metric.

"Brattin, Bill" ---05/16/2012 01:25:43 PM---here is a summary table that has calculations based on expopsure truckated at 1980. I really do not

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here is a summary table that has calculations based on expopsure truckated at 1980. I really do not see the lohic in this, and in most cases, the AIC value increases, indicating a poorer agreement between model and data.

The main conclusions are:

- 1) Monovariate models based on either Cbar or CE are MUCH worse than bivariate models that include T as an independent variable
- 2) Combining CE and T into one variable (RTW CE) is better than CE alone, but not as good as treating them separately (too bad!)
- 3) Bivariate Hill is not better than bivariate log-logistic
- 3) Cum normal model still is best

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[attachment "Summary v3.xls" deleted by Bob Benson/R8/USEPA/US]